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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,715	04/06/2001	Christine W. Jarvis	CXU-350	5602
22827	7590	12/16/2003	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			RHEE, JANE J	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,715

Applicant(s)

JARVIS ET AL.

Examiner

Jane J Rhee

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/27/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/03 has been entered.

Withdrawn Rejections

2. The 35 U.S.C. 102 rejection of claims 41-44,46-55,53,56-61,63-64,67-74 anticipated by Obayashi et al. made of record in paragraph 2 of Paper 14 has been withdrawn due to Applicant's amendment in Paper 17.
3. The 35 U.S.C. 103 rejection of claims 45,55,62,65 over Obayashi et al. in view of Benstock et al. made of record in paragraph 3 of Paper 14 has been withdrawn due to Applicant's amendment in Paper 17.
4. The 35 U.S.C. 103 rejection of claim 52 over Obayashi et al. in view of Arakawa et al. made of record in paragraph 4 of Paper 14 has been withdrawn due to Applicant's amendment in Paper 17.
5. The 35 U.S.C. 103 rejection of claims 54,66 over Obayashi et al. in view of Wilhoit et al. made of record in paragraph 5 of Paper 14 has been withdrawn due to Applicant's amendment in Paper 17.

Claim Rejections - 35 USC § 102

Art Unit: 1772

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 41-44,46-51,53,56-61,63-64,67-74,75-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaylord Jr. (3970079).

Gaylord Jr. discloses a first substrate having an upper and a lower surface (figure 12 number 55) and a second substrate having an upper and lower surface (figure 12 number 52), positioning a continuous thermoplastic tape folded into a z-shaped configuration bonded adjacent to the first substrate and the second substrate (figure 12 number 66) such that the tape is in operative communication with the upper and lower surfaces of the first substrate and with the upper and lower surfaces of the second substrate (figure 12 number 66), and forming a seam by bonding the tape to the upper and lower surfaces of the first substrate and to the upper and lower surfaces of the second substrate (figure 12 numbers 55,52), wherein the bonding between the tape and the upper and lower surfaces of the first and second substrates includes physical bonding and optionally adhesive bonding (col. 4 lines 39-41). Gaylord Jr. discloses that the method further comprises heating the first and second tape portion to a predetermined temperature (col. 4 lines 25-28). Gaylord Jr. discloses that the first and second portion of the tape is subjected to pressure (col. 4 line 39). Gaylord Jr. discloses that the first tape portion to simultaneous heat and pressure and subjecting the second tape portion to simultaneous heat and pressure (col. 4 lines 39-41). Gaylord

Art Unit: 1772

Jr. discloses that the first substrate and second substrate are fabrics (col.3 line 48).

Gaylord Jr. discloses that the tape portions are folded after being placed adjacent to first substrate and the second substrate (col. 4 lines 19-31). Gaylord Jr. discloses that the bonding between the tape and the upper and lower surfaces of the first and second substrates includes adhesive bonding (col.4 lines 19-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 43,48-49,56,58-61,67-69,72-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaylord Jr. in view of Obayashi et al. (4410575), Efunda, Encyclopedia of Petroleum, and Lumicor.

Gaylord Jr. discloses the method of forming a seam between two substrates described above. Gaylord Jr. fails to disclose that the first and second predetermined temperature is between about 10°C below the thermal melting temperature of the thermoplastic material to about 50°C above the thermal melting temperature of the thermoplastic material. Gaylord Jr. fails to disclose multiple layers in the tape portion and that the layers contain thermoplastic material having a first thermal melting temperature and another one of the layers contain a thermoplastic material having a second thermal melting temperature, the second thermal melting temperature being

Art Unit: 1772

greater than the first thermal melting temperature. Gaylord Jr. fails to disclose that at least one of the tape portions comprises polyurethane.

Obayashi et al. discloses that the first and second predetermined temperature is between about 10°C below the thermal melting temperature of the thermoplastic material to about 50°C above the thermal melting temperature of the thermoplastic material (col. 4 lines 25-31, polyurethane has a melting temperature of 75-137 degrees Celsius taught by the Efunda reference), wherein the tape portion comprises multiple layers (col. 5 lines 36-38) and that the layers contain thermoplastic material having a first thermal melting temperature (col. 5 lines 49-50 the adhesive, acrylic resin is a thermoplastic resin taught by the Encyclopedia of Petroleum product) and another one of the layers contain a thermoplastic material having a second thermal melting temperature (col. 3 lines 55-59), the second thermal melting temperature being greater than the first thermal melting temperature (col. 3 lines 57-58 Lumicor teaches that the acrylic resin has a melting temperature of 148 degrees celsius), for the purpose of melting the bonding tape to firmly bond the end portions of the fabric to each other (col. 4 lines 35-38). Obayashi et al. discloses that at least one of the tape portions comprises polyurethane (col. 8 line 25) for the purpose of providing a synthetic polymer material capable thermally melting at a temperature of 100-350 degrees Celsius to bond the fabric substrates together (col. 3 lines 55-58 and col. 4 lines 25-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with the first and second predetermined temperature is between about 10°C below the thermal melting

Art Unit: 1772

temperature of the thermoplastic material to about 50°C above the thermal melting temperature of the thermoplastic material wherein the tape portion comprises multiple layers and that the layers contain thermoplastic material having a first thermal melting temperature and another one of the layers contain a thermoplastic material having a second thermal melting temperature, the second thermal melting temperature being greater than the first thermal melting temperature in order to melt the bonding tape to firmly bond the end portions of the fabric to each other (col. 4 lines 35-38) as taught by Obayashi et al.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide that at least one of the tape portions comprises polyurethane in order to provide a synthetic polymer material capable thermally melting at a temperature of 100-350 degrees Celsius to bond the fabric substrates together (col. 3 lines 55-58 and col. 4 lines 25-31) as taught by Obayashi et al.

8. Claims 45,55,62,65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaylord Jr. in view of Benstock et al. (5003902).

Gaylord Jr. discloses the method of forming a seam between two substrates described above. Gaylord Jr. fails to disclose that the pressure is between about 40 pounds per square inch to about 120 pounds per square inch. Gaylord Jr. fails to disclose that the edge of at least one of the substrate is non linear. Benstock et al. teaches that the pressure is 40 pounds per square inch (col. 5 line 2) for the purpose of

Art Unit: 1772

providing optimum heating and fusing characteristics (col. 5 line 1). Benstock et al. discloses that the edge of at least one of the substrate is non linear (figure 1A number 10) for the purpose creating a liquid tight barrier (col. 3 lines 13-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with the pressure of 40 pounds per square inch in order to provide optimum heating and fusing characteristics (col. 5 line 1) as taught by Benstock et al.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with the edge of at least one of the substrate being non linear (col. 7 line 39) in order to create a liquid tight barrier (col. 3 lines 13-14) as taught by Benstock et al.

9. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaylord Jr. in view of Arakawa et al. (5591521).

Gaylord Jr. discloses the method of forming a seam between two substrates described above. Gaylord Jr. fail to disclose that the tape portions are folded prior to being placed adjacent to the first substrate and the second substrate. Arakawa et al. teaches that the tape portions are folded prior to being placed adjacent to the first substrate and the second substrate for the purpose of having a portion of the tape being easily released to latch on to the second substrate (col. 5 line 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with the tape portions that are folded prior to being placed adjacent to the first substrate and the second substrate

Art Unit: 1772

in order to have a portion of the tape being easily released to latch on to the second substrate (col. 5 line 55) as taught by Arakawa et al.

10. Claims 54 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaylord Jr. in view of Wilhoit et al. (6096420).

Gaylord Jr. discloses the method of forming a seam between two substrates described above. Gaylord Jr. fail to disclose that the method further comprises etching at least one of the surfaces of the first substrate or the second substrate. Wilhoit et al. teaches etching (col. 2 lines 64-65) on the surfaces of plastic films for the purpose of enhancing the affinity of the film surface to the pressure sensitive adhesive (col. 2 lines 58-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Gaylord Jr. with etching on the surfaces of plastic films in order to enhance the affinity of the film surface to the pressure sensitive adhesive (col. 2 lines 58-60) as taught by Wilhoit et al.

Response to Arguments

11. Applicant's arguments with respect to claims 41-76 have been considered but are moot in view of the new ground(s) of rejection.

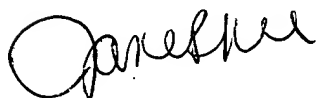
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane J Rhee whose telephone number is 703-605-4959. The examiner can normally be reached on M-F.

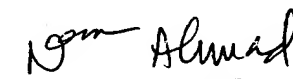
Art Unit: 1772

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Jane Rhee
December 11, 2003



NASSER AHMAD
PRIMARY EXAMINER